# This Page Is Inserted by IFW Operations and is not a part of the Official Record

### **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

### IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

### **NEW APPLICATION TRANSMITTAL**

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**Mail Stop Patent Application Commissioner for Patents** P.O. Box 1450 Alexandria, VA 22313-1450



### **NEW APPLICATION TRANSMITTAL**

Transmitted herewith for filing is the patent application of

Inventor(s): XIANGLIN WANG

### WARNING:

37 CFR § 1.41 (a)(1) points out:

"(a) A Patent is applied for in the name or names of the actual inventor or inventors.

"(1) The inventorship of a nonprovisional application is that inventorship set forth in the oath or declaration as prescribed by § 1.63, except as provided for in § 1.53 (d)(4) and § 1.63(d). If an oath or declaration as prescribed by § 1.63 is not filed during the pendency of a nonprovisional application, the inventorship is that inventorship set forth in the application papers filed pursuant to § 1.53 (b), unless a petition under this paragraph accompanied by the fee set forth in § 1.17(i) is filed supplying or changing the name or names of the inventor or inventors."

METHOD AND APPARATUS FOR IMAGE DETAIL ENHANCEMENT WITHOUT For (title): ZIGZAGGED EDGE ARTIFACT

Type of Application

This new application is for a(n)

(check one applicable item below)

D	(]	Original (nonprovisional)
[	]	Design
[	1	Plant

WARNING: Do not use this transmittal for a completion in the U.S. of an International

Application under 35 U.S.C. 371(c)(4), unless the International Application is being filed as a divisional, continuation or continuation-in-part application.

WARNING: Do not use this transmittal for the filing of a provisional application.

NOTE: If one of the following 3 items apply then complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF A PRIOR U.S. APPLICATION CLAIMED and a NOTIFICATION IN PARENT APPLICATION OF THE FILING OF THIS CONTINUATION APPLICATION.

[	]	Divisional
[	]	Continuation
[	]	Continuation-in-part (C-I-P)

### 2. Benefit of Prior U.S. Application(s)

NOTE: A nonprovisional application may claim an invention disclosed in one or more prior filed copending nonprovisional applications or copending international applications designating the United States of America. In order for a nonprovisional application to claim the benefit of a prior filed copending nonprovisional application or copending international application designating the United States of America, each prior application must name as an inventor at least one inventor named in the later filed nonprovisional application and disclose the named inventor's invention claimed in at least one claim of the later filed nonprovisional application in the manner provided by the first paragraph of 35 U.S.C. 112. Each prior application must also be:

- (i) An international application entitled to a filing date in accordance with PCT Article 11 and designating the United States of America; or
- (ii) Complete as set forth in § 1.51(b); or
- (iii) Entitled to a filing date as set forth in § 1.53(b) or § 1.53(d) and include the basic filing fee set forth in § 1.16; or
- (iv) Entitled to a filing date as set forth in § 1.53(b) and have paid therein the processing and retention fee set forth in § 1.21(I) within the time period set forth in § 1.53(f).
- 37 CFR § 1.78(a)(1).

NOTE: If the new application being transmitted is a divisional, continuation or a continuation-in-part of a parent case, or where the parent case is an International Application which designated the U.S., or benefit of a prior provisional application is claimed, then check the following item and complete and attach ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

#### **WARNING:**

If an application claims the benefit of the filing date of an earlier filed application under 35 U.S.C. 120, 121 or 365(c), the 20-year term of that application will be based upon the filing date of the earliest U.S. application that the application makes reference to under 35 U.S.C. 120,121 or 365(c). (35 U.S.C. 154(a)(2) does not take into account, for the determination of the patent term, any application on which priority is claimed under 35 U.S.C. 119, 365(a) or 365(b)). For a c-i-p application, applicant should review whether any claim in the patent that will issue is supported by an earlier application and, if not, the applicant should consider canceling the reference to the earlier filed application. The term of a patent is not based on a claim-by-claim approach. See Notice of April 14, 1995, 60 Fed. Reg. 20, 195, at 20,205.

#### **WARNING:**

When the last day of pendency of a provisional application falls on a Saturday, Sunday, or Federal holiday within the District of Columbia, any nonprovisional application claiming benefit of the provisional application must be filed prior to the Saturday, Sunday, or Federal holiday within the District of Columbia. See 37 CFR § 1.78(a)(3).

[ ] The new application being transmitted claims the benefit of prior U.S. application(s). Enclosed are ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

### 3. Papers Enclosed

A. Required For Filing Date Under 37 § CFR 1.53(b) (Regular) or 37 § CFR 1.153 (Design) Application

Pages of Specification 23
Pages of Claims 12
Sheets of Drawing 7

#### **WARNING:**

DO NOT submit original drawings. A high quality copy of the drawings should be supplied when filing a patent application. The drawings that are submitted to the Office must be on strong, white, smooth, and non-shiny paper and meet the standards according to § 1.84. If corrections to the drawings are necessary, they should be made to the original drawing and a high-quality copy of the corrected original drawing then submitted to the Office. Only one copy is required or desired. For comments or proposed then-new 37 CFR 1.84, see Notice of March 9, 1988 (1990 O.G. 57-62).

NOTE: "Identifying indicia, if provided, should include the application number or the title of the invention, inventor's name, docket number (if any), and the name and telephone

number of a person to call if the Office is unable to match the drawings to the proper application. This information should be placed on the back of each sheet of drawing a minimum distance of 1.5 cm. (5/8 inch) down from the top of the page ... "37 CFR 1.84 (c)).

### (complete the following, if applicable)

		enclosed drawing(s) are photograph(s), and there is also attached a "PETITIC ACCEPT PHOTOGRAPH(S) AS DRAWING(S)." 37 CFR 1.84(b).	N
[ ]	info	rmal .	
В.	Othe	r Papers Enclosed X	
	Pa	ages of declaration and power of attorney 2	
	Pá	ages of abstract1	
	A	ssignment and Cover Sheet4	
	0	ther	
			_
4.	Add	litional papers enclosed	
	[ ]	Amendment to claims	
		[ ] Cancel in this applications claims before calculating the filing fe (At least one original independent claim must be retained for filing purposes.)	
		[ ] Add the claims shown on the attached amendment. (Claims added have been numbered consecutively following the highest numbered origin claims.)	
	[ ]	Preliminary Amendment	
	[]	Information Disclosure Statement (37 CFR 1.98)	
	[ ]	Form PTO-1449 (PTO/SB/08A and 08B)	
	[]	Citations	

[]	Declaration of Biological Deposit
[]	Submission of "Sequence Listing," computer readable copy and/or amendment pertaining thereto for biotechnology invention containing nucleotide and/or amino acid sequence.
[]	Authorization of Attorney(s) to Accept and Follow Instructions from Representative
[]	Request For Nonpublication of Application Under 35 U.S.C. §122(b), 37 C.F.R. §1.213(a)
[]	Special Comments
[ ]	Other

### 5. Declaration or oath (including power of attorney)

NOTE: A newly executed declaration is not required in a continuation or divisional application provided that the prior nonprovisional application contained a declaration as required, the application being filed is by all or fewer than all the inventors named in the prior application, there is no new mater in the application being filed, and a copy of the executed declaration filed in the prior application (showing the signature or an indication thereon that it was signed) is submitted. The copy must be accompanied by a statement requesting deletion of the names of person(s) who are not inventors of the application being filed. If the declaration in the prior application was filed under § 1.47, then a copy of that declaration must be filed accompanied by a copy of the decision granting § 1.47 status or, if a nonsigning person under § 1.47 has subsequently joined in a prior application, then a copy of the subsequently executed declaration must be filed. See 37 CFR §§ 1.63(d) (1)-(3).

NOTE: A declaration filed to complete an application must be executed, identify the specification to which it is directed, identify each inventor by full name including family name and at least one given name, without abbreviation together with any other given name or initial, and the residence, post office address and country or citizenship of each inventor, and state whether the inventor is a sole or joint inventor. 37 CFR § 1.63(a)(1)-(4).

[X] Enclosed,

[X] executed.

	executed by (check all applicable boxes)
[X]	inventor(s).
[ ]	legal representative of inventor(s). 37 CFR 1.42 or 1.43
[]	joint inventor or person showing a proprietary interest on behalf of inventor who refused to sign or cannot be reached.
	[ ] this is the petition required by 37 CFR 1.47 and the statement required by 37 CFR 1.47 is also attached.
See item 13	below for fee.
[ ] Not	Enclosed.
NOTE:	Where the filing is a completion in the U.S. of an International Application or where the completion of the U.S. application contains subject matter in addition to the International Application, the application may be treated as a continuation or continuation-in-part, as the case may be, utilizing ADDED PAGE FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION CLAIMED.
[ ]	Application is made by a person authorized under 37 CFR 1.41(c) on behalf of all the above named inventor(s).
(The dec	claration or oath, along with the surcharge required by 37 CFR 1.16(e) can be filed subsequently).
	[ ] Showing that the filing is authorized.
(not required	unless called into question. 37 CFR 1.41(d)).

[ ] English

### **WARNING:**

If the named inventors are each not the inventors of all the claims an explanation, including the ownership of the various claims at the time the <u>last</u> claimed invention was made, should be submitted.

omittea.	
The inv	entorship for all the claims in this application are:
[X]	The same.
	or
[ ]	Not the same. An explanation, including the ownership of the various claims at the time the <u>last</u> claimed invention was made,
	[ ] is submitted.
	[ ] will be submitted.
7.	Publication/Nonpublication
	Request is being submitted with this application on filing that the application be:
	[X] published. Publication fee is enclosed.
	[ ] <u>not</u> published.
	[ ] A Request For Nonpublication of Application Under 35 U.S.C. §122(b), 37 C.F.R. §1.213(a) is submitted.
8.	Language
NOTE:	An application including a signed oath or declaration may be filed in a language other than English. An English translation of the non-English language application and the processing fee of \$130.00 required by 37 CFR 1.17(k) is required to be filed with the application, or within such time as may be set by the Office. 37 CFR 1.52(d).

[ ] Non-English

	[ ] The attached translation includes a statement translation and is accurate. 37 CFR 1.52(d).							
9.	Ass	ignment						
X	] An	assignment	of the inve	ention to <u>Sam</u>	sung Electro	onics Co., L	_td.	
	[X]			ate [ ] "COV W PATENT A				
	[]	will follow	<i>ı</i> .					
				ted with a nev assignment."				
WARNING	:							
				ER 37 CFR 3. Notice of Ap				ıuation-in-
. 10	O. Cert	tified Copy		-				
Certifi	ed cor	oy(ies) of ap	oplication(s	<b>)</b> :	•			
Country	Αp	pln.	No.	Filed				
* Country	Ap	pln.	No.	Filed				
* Country	Αp	pln.	No.	Filed_				
* from v	which	priority is c	laimed					
-		are) attache follow.	d					
NOTE	: The	foreign app		ming the basi 37 CFR 1.5			ity must be r	eferred to

NOTE: This item is for any foreign priority for which the application being filed directly relates. If any parent U.S. application or International Application from which this application claims benefit under 35 U.S.C. 120 is itself entitled to priority from a prior foreign application, then complete item 18 on the ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED.

1	1	Eac	Calculation	127	CED	1	161
1	1	-66	Calculation	1.37	C.PR		຺຺ເຕ

A.
[X] Regular Application

### **CLAIMS AS FILED**

B. [ ]

	Number Filed	١	Number Extr	a	Rate	Basic Fee 37 CFR 1.16(a)	
						\$ <u>770.00</u>	
Total Claims							
(37 CFR 1.16(c))	27	-20=	7	X	\$ 18.00	\$ <u>126.00</u>	
Independent Claims	•		0	V	4 00 00	s 0.00	
(37 CFR 1.16(b))	2	-3 =	0	Х	\$ 86.00	\$0.00	
Multiple dependent of any (37 CFR 1.16		+			\$280.00	\$	

FR 1.16(c))	27	-20=	/	Х	\$ 18.00	\$	126.00
endent Claims FR 1.16(b))	2	-3=	0	X	\$ 86.00	\$	0.00
rn 1.10(b))	2	-3 -	U	^	¥ 00.00	<b>*</b> —	0.00
ole dependent clai	im(s),						
(37 CFR 1.16(d))	)	+			\$280.00	\$	
[ ] Amendme					sed.		
[] Fee for ex	tra claims	is not being	g paid at	this time.			
canceled	by amend	ment, prior	to the e	xpiration o	they must be f the time peri of fee deficienc	od set fo	r response
		Fi	ling Fee	Calculatio	n	\$	896.00
Design Applic	ation						9
(\$430.00-37	CFR 1.16	S(f))					
		<b>E</b> ;	lina Foo	Calculation	n	Ś	

Filing Fee Calculation \$\_\_\_\_\_

C.							
[ ]	Pla	nt Ap	plicat	ion			
	(\$4	80.0	0-37	CFR 1.16(g)	)		
					Filing Fee Calcula	ntion	\$
	12	Sma	ıll Enti	ty Statement	(s)		
	[ ]		ement	t(s) that this i	s a filing by a small enti	ty under 37 CFF	R 1.9 and 1.27 is (are
WARNI	NG:						
refiling a conting a new d applicat 365(c) applicat reference statemed	of an nued leterrition. of a tion coe to ent in.	appl prose minat A no prior or in the the ie pa	icatior ecutior ion as onprov applic the pa state prior a	n under § 1.5; n application of to continued visional application, or a retent if the no ment in the papplication of tof the sma	ation or patent in which 3 as a continuation, divisunder § 1.53 (d)), or the entitlement to small entestion claiming benefit to eissue application may enprovisional application prior application or in the patent and statutory on." 37 CFR §1.28(a)(2)	sion, or continual filing of a reissicity status for the under 35 U.S.C rely on a state or the reissue the patent or incus as a small er or filing fee will	ation-in-part (including ue application requires e continuing or reissue . 119(e), 120,121, or ment filed in the prior application includes a cludes a copy of the ntity is still proper and
				(compl	lete the following, if app	plicable)	
ſ	l Sta	tus a	ıs a sr	nall entity wa	as claimed in prior applic	cation	
					, filed on		hich benefit is
			being	-	this application under:		
35	U.S.	.C.	[]	119(e), 120, 121, 365(c),			
an	d wh	ich s			tity is still proper and do	esired.	
an	u ****	1011 3	tatas	as a sirial on	tity to other propor and a	0000.	
[ ]	) 4	op.	y of the	he statement	in the prior application	is included.	

### Filing Fee Calculation (50% of A, B or C above)

		\$
and	excess of the full fee paid will be refunded if small en a refund request are filed within 2 months of the date of The two-month period is not extendable under § 1.13	of timely payment of a full
13. Req	uest for International-Type Search (37 CFR 1.104(d))	
	(complete, if applicable)	
	ase prepare an international-type search report for the national examination on the merits takes place.	is application at the time
14.	Fee Payment Being Made At This Time	
[ ] Not	Enclosed.	
[]	No filing fee is to be paid at this time.	
(This and th	e surcharge required by 37 CFR 1.16(e) can be paid so	ubsequently.)
[X] Enc	losed	
[X]	Filing fee	\$896.00
[X]	Recording assignment (\$40.00; 37 CFR 1.21(h))	
	(See attached COVER SHEET FOR ASSIGNMENT ACCOMPANYING NEW APPLICATION)	\$ 40.00
ıxı	Publication fee (\$300.00, 37 C.F.R. 1.18(d))	\$ 300.00
	Petition fee for filing by other than all the inventors or person on behalf of the inventor where inventor refused to sign or cannot be reached. (\$130.00; 37 CFR 1.47 and 1.17(i))	\$
[ ]		\$
[ ]	Processing and retention fee (\$130.00; 37 CFR 1.53(d) and 1.21(l))	\$

[ ] Fee for international-type search report (\$40.00; 37 CFR 1.21(e))	\$
abandoned for failing to complete the application pursuant to 37 C as well as the changes to 37 CFR 1.53 and 1.78(a)(1), indicate the benefit of a prior U.S. application, either the basic filing feet	CFR 1.53(f) and this, lat in order to obtain must be paid, or the
Total fees enclosed	\$ <u>1,236.00</u>
Method of Payment of Fees	·
Check in the amount of \$1.236.00	
	A duplicate of this
Fees should be itemized in such a manner that it is clear for whi are paid. 37 CFR 1.22(b).	ch purpose the fees
. Authorization to Charge Additional Fees	
re to be paid on filing, the following items should <u>not</u> be complete	ed.
	ected high charges,
[X] 37 CFR 1.16(a), (f) or (g) (filling fees)	
	(\$40.00; 37 CFR 1.21(e))  37 CFR 1.21(l) establishes a fee for processing and retaining an abandoned for failing to complete the application pursuant to 37 Cas well as the changes to 37 CFR 1.53 and 1.78(a)(1), indicate the the benefit of a prior U.S. application, either the basic filing fee processing and retention fee of § 1.21(l) must be paid within 1 year under § 53(f).  Total fees enclosed  Method of Payment of Fees  Check in the amount of \$1,236.00  Charge Account No. 01-1960 in the amount of \$  transmittal is attached.  Fees should be itemized in such a manner that it is clear for whi are paid. 37 CFR 1.22(b).  Authorization to Charge Additional Fees  The to be paid on filing, the following items should not be complete to the paid on filing, the following items should not be complete to the paid on filing, the following items should not be complete to the paid on filing, the following items should not be complete to the paid on filing, the following items should not be complete.  The Commissioner is hereby authorized to charge the following account claims, the application to Account the paper and during the entire pendency of this application to Account the paper and during the entire pendency of this application to Account the paper and during the entire pendency of this application to Account the paper and the

#### NOTE:

Because additional fees for excess or multiple dependent claims not paid on filing or on later presentation must only be paid or these claims canceled by amendment prior to the expiration of the time period set for response by the PTO in any notice of fee deficiency (37 CFR 1.16(d)), it might be best not to authorize the PTO to charge additional claim fees, except possibly when dealing with amendments after final action.

- [ ] 37 CFR 1.16(e), (surcharge for filing the basic filing fee and/or declaration on a date later than the filing date of the application)
- [ ] 37 CFR §§1.17(a)(1)-(5) (extension fees pursuant to § 1.136(a)).
- [ ] 37 CFR 1.17(a)(1)-(5) (application processing fees)

#### NOTE:

"... A written request may be submitted in an application that is an authorization to treat any concurrent or future reply, requiring a petition for an extension of time under this paragraph for its timely submission, as incorporating a petition for extension of time for the appropriate length of time. An authorization to charge all required fees, fees under § 1.17, or all required extension of time fees will be treated as a constructive petition for an extension of time in any concurrent or future reply requiring a petition for an extension of the fee set forth in § 1.17(a) will also be treated as a constructive petition for an extension of time in any concurrent reply requiring a petition for an extension of time under this paragraph for its timely submission." 37 CFR § 1.136(a)(3).

[ ] 37 CFR 1.18 (issue fee at or before mailing of Notice of Allowance, pursuant to 37 CFR 1.311 (b).

#### NOTE:

Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of a Notice of Allowance, the issue fee will be automatically charged to the deposit account at the time of mailing the notice of allowance. 37 CFR 1.311(b).

### NOTE:

37 CFR 1.28(b) requires "Notification of any change in status resulting in loss of entitlement to small entity status must be filed in the application...prior to paying, or at the time of paying...the issue fee..." From the wording of 37 CFR 1.28(b): (a) notification of change of status must be made even if the fee is paid as "other than a small entity"; and (b) no notification is required if the change is to another small entity.

### 17. Instructions As To Overpayment

NOTE: "... Amounts of twenty-five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amounts; amounts over twenty-five dollars may be returned by check or, if requested, by credit to a deposit account." 37 CFR § 1.26(a).

- [X] Credit Account No. 01-1960
- [] Refund

#### SIGNATURE OF PRACTITIONER

Reg. No. 33,783

SIGNATURE OF ATTORNEY

Tel. No. (949) 223-9600

Kenneth L. Sherman

MYERS DAWES ANDRAS & SHERMAN 19900 MacArthur Blvd., Suite 1150

Irvine, California 92612

#### **CERTIFICATION UNDER 37 CFR 1.10**

**EVELYN MENJIVAR** 

(Type or print name of person mailing paper)

Signature of person mailing papel

#### **WARNING:**

Certificate of mailing (first class) or facsimile transmission procedures of 37 CFR 1.8 cannot be used to obtain a date of mailing or transmission for this correspondence.

#### **WARNING:**

Each paper or fee filed by "Express Mail" must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 CFR 1.10(b).

"Since the filing of correspondence under § 1.10 without the Express Mail mailing label thereon is an oversight than can be avoided by the exercise of reasonable care, requests for waiver of this requirement will not be granted on petition." Notice of Oct. 24, 1996, 60 Fed. Reg. 56,439, at 56,442.

[X]	Incorporation by reference of added pages  (Check the following item if the application in this transmittal claims the benefit of prior U.S. application(s) (including an international application entering the U.S. stage as a continuation, divisional or C-I-P application) and complete and attach the ADDED PAGES FOR NEW APPLICATION TRANSMITTAL WHERE BENEFIT OF PRIOR U.S. APPLICATION(S) CLAIMED).
[ ]	Plus Added Pages for New Application Transmittal Where Benefit Of Prior U.S. Application(s) Claimed
	Number of pages added
[]	Plus Added Pages for Papers Referred To In Item 4 Above
	Number of pages added
[]	Plus Added Pages deleting names of inventor(s) named in prior application(s) who
	is/are no longer inventor(s) of the subject matter claimed in this application.
	Number of pages added
[]	Plus "Assignment Cover Letter Accompanying New Application"
	Number of pages added
[X]	Statement Where No Further Pages Added
	(If no further pages form a part of this transmittal, then end this transmittal with this page and check the following item)
[X]	This transmittal ends with this page.